



National Agromet Advisory Service Bulletin
Based on
Extended Range Weather Forecast (ERFS)

Validity: 30 August to 12 September 2019

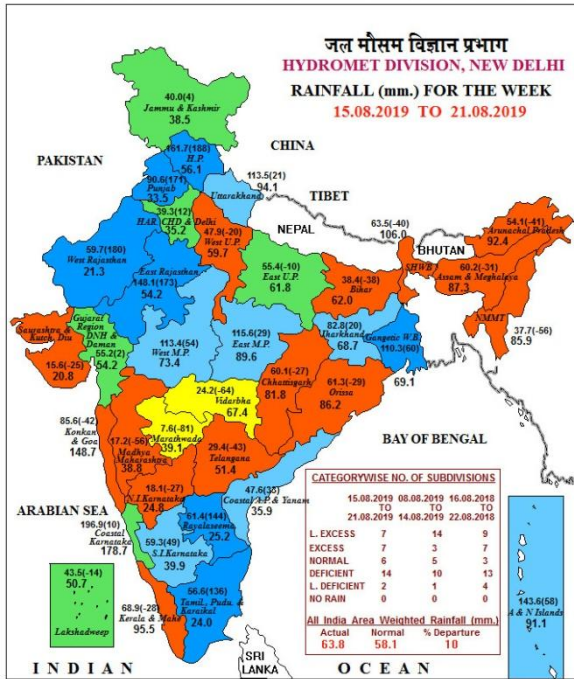
Date of issue: 30 August 2019

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&
Earth System Science Organization
India Meteorological Department

Realized Rainfall and Extended Range Forecast (Rainfall and Temperatures)

Realized Rainfall (15th to 28th August, 2019)

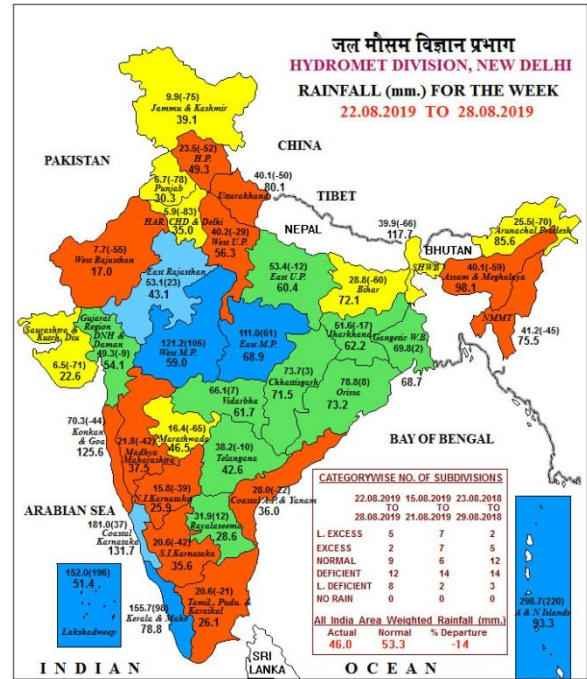
भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



LEGEND: ■ L. EXCESS (+60% OR MORE) ■ EXCESS (+20% TO +59%) ■ NORMAL (+19% TO -19%)
■ DEFICIENT (-20% TO -59%) ■ L. DEFICIENT (-60% TO -99%) ■ NO RAIN (-100%) ■ NO DATA

NOTES:
 (a) Rainfall figures are based on operational data.
 (b) Small figures indicate actual rainfall (mm.), while bold figures indicate Normal rainfall (mm.)
 Percentage Departures of Rainfall are shown in Brackets.

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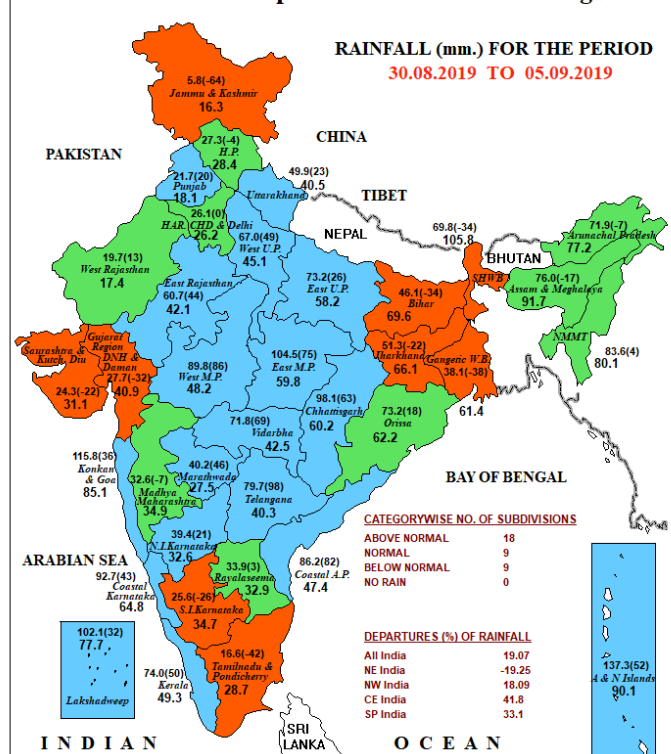
- Normal or above normal rainfall occurred in both the weeks in East Uttar Pradesh, East Rajasthan, Gujarat Region, East Madhya Pradesh, West Madhya Pradesh, Jharkhand, Gangetic West Bengal, Coastal Karnataka, Rayalaseema, Lakshadweep and Andaman & Nicobar Islands.
- Normal or above normal rainfall occurred in either of the two weeks in Jammu & Kashmir, Uttarakhand, Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, West Rajasthan, Vidarbha, Chhattisgarh, Odisha, Coastal Andhra Pradesh & Yanam, South Interior Karnataka, Telangana, Tamil Nadu Puducherry & Karaikal and Kerala & Mahe.
- Below normal rainfall occurred in both the weeks in West Uttar Pradesh, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra, Marathwada, Bihar, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura (NMMT) and North Interior Karnataka.

Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC – 28 August) (30th August to 12th September 2019)

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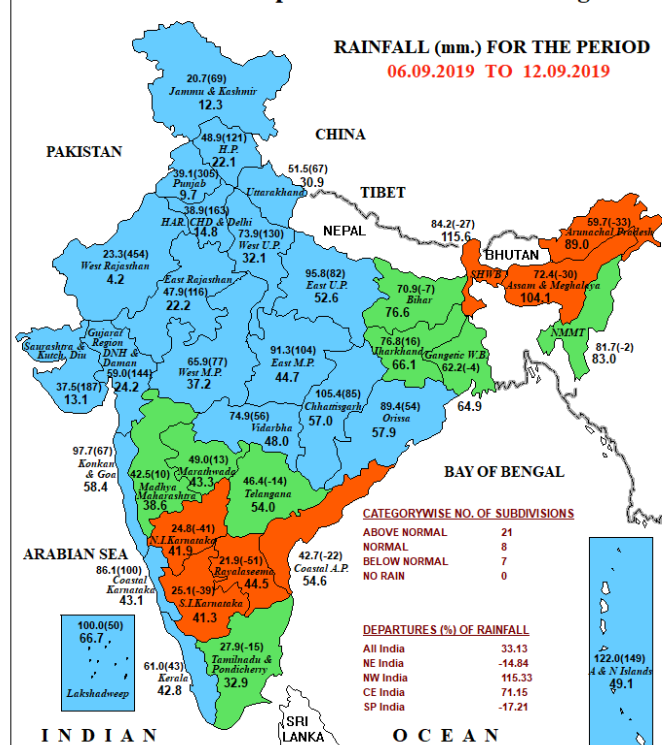
Rainfall Forecast Map - Normal RF Based Categories



NOTES:
 (a) Rainfall figures are based on MME Forecast data.
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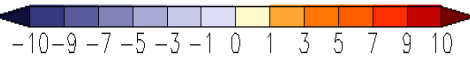
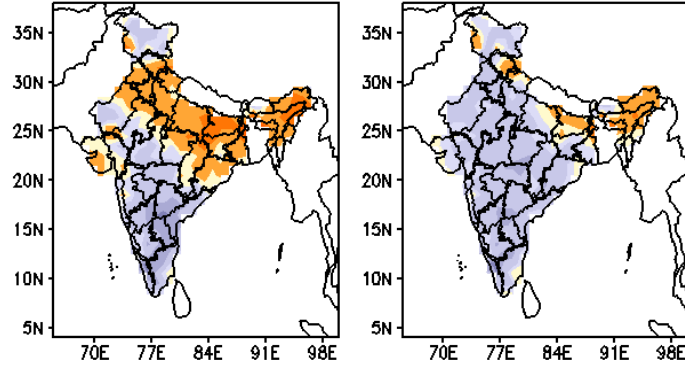
- **Week 1 (30.08.2019 to 05.09.2019):** Mainly above normal rainfall over central parts of India (Odisha, Chhattisgarh, Madhya Pradesh and adjoining parts of Uttar Pradesh, Maharashtra) and northern part of the country along with that over the southern peninsula (except Tamil Nadu). The eastern and northeastern parts of the country, Gujarat and Tamil Nadu region will have below normal rainfall during the week.
- **Week 2 (06.09.2019 to 12.09.2019):** Above normal rainfall likely over many parts of country during the week except that over eastern and adjoining northeastern belts of the country and south-eastern peninsular region during the week.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for next 2 weeks (IC – 28 August)
(30th August to 12th September 2019)**

MME forecast Tmax anomaly (Deg C)

(Week1: 30Aug–05Sep)

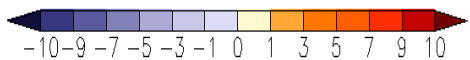
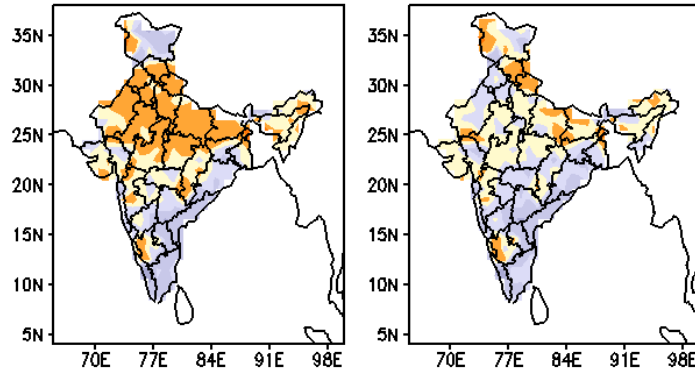
(Week2: 06Sep–12Sep)



MME forecast Tmin anomaly (Deg C)

(Week1: 30Aug–05Sep)

(Week2: 06Sep–12Sep)



Maximum Temperature (Tmax)

- **Week 1 (30.08.2019 to 05.09.2019) and Week 2 (06.09.2019 to 12.09.2019):** Tmax anomaly is likely to be positive over northern parts of India and along the Indo-Gangetic region during week 1. During week 2, it is mainly below normal over most parts of India.

Minimum Temperature (Tmin)

- **Week 1 (30.08.2019 to 05.09.2019) and Week 2 (06.09.2019 to 12.09.2019):** Above normal Tmin over northern parts of India and adjoining central parts of India during the period.

Strategic Agricultural Planning based on weather during next two weeks till 05th September 2019

Agromet Advisories

Kerala

Amount of rainfall received over Kerala during the period from 01 June to 28 August 2019 is 1816.6 mm (3% deficit). The extended range weather forecast for next two weeks (30 August- 05 September and 06 - 12 September) is above normal.

- To control the spread of Bacterial leaf blight in paddy during rainy season, mix 20 g of cow dung in one litre of water and spray the cow dung slurry by mixing with 20g of Pseudomonas in one litre of water.
- Apply fertilizers @ 250g Urea, 285g Rock phosphate, 350g Potash, 500 g MgSO₄ and 2 kg lime per plant in coconut. As a prophylactic measure to control bud rot, apply 1% Bordeaux mixture in the tender leaf axils.
- Due to heavy rains in monsoon season, there is a chance of quick wilt disease in pepper. To control quick wilt and pollu disease, drench the soil with 0.2 % Copper oxychloride and spray the aerial part(plant) with 1% Bordeaux mixture as a prophylactic measure. Application Trichoderma/Pseudomonas culture will control the quick wilt infestation.
- High rainfall during this month may cause fruit rot and leaf fall in nutmeg. As a prophylactic measure, apply Trichoderma mixture (Add 2 kg Trichoderma to a mixture of 90 kg FYM and 10 kg Neemcake and keep for two weeks with sufficient moisture). Basal application of 2.5 kg of this mixture followed by foliar spray with Pseudomonas (20g/litre) or 1% Bordeaux mixture can control the fruit rot.
- There is a chance of mahali disease in arecanut due to heavy rainfall. The conidia of the fungus carried by wind and rainwater is favourable for disease spread. Prophylactic spraying of Bordeaux mixture (1%) or Copper Oxychloride 50WP (2g/l) with sticker is recommended.
- The prevailing cool and moist conditions, there is a chance of soft rot disease in ginger. To control soft rot, drench the soil with 1% Bordeaux mixture/0.3% Mancozeb. Apply green leaf mulching to prevent soil erosion and to increase the organic matter content in the soil.
- Due to prolonged rains/ cloudy days, there is a chance of incidence of fungal diseases on leaves and buds in Rubber. To control, spray Indofil M45 4g/ litre.
- There is a chance of erwinia rot in banana due to heavy rainfall in this season. As a precaution, apply lime in the banana basin or bleaching powder in the irrigation channels. To enhance the disease resistance, drench the basin with Pseudomonas @ 20g per litre of water. Affected plants can be protected by drenching the basin with 5 g bleaching powder or 3 g Copper oxychloride or 2g Copper hydroxide per one litre of water. Severely affected plants should be cut and removed to prevent the spread of disease.

Karnataka

Amount of rainfall received over North Interior Karnataka is 440.3 mm (29 % excess), South Interior Karnataka is 621.0 mm (18 % excess)) and Coastal Karnataka is 3043.1 mm (11 % excess) during 01

June to 28 August. The extended range weather forecast for next two weeks (30 August - 05 September and 06 - 12 September) over south interior Karnataka is below normal for both the weeks whereas North interior Karnataka is above normal for week-1 and below normal for week-2.

South Interior Karnataka

- Due to warm and humid weather, possibility of pest and disease build up is more in already sown crops. Take prophylactic measures.
- Wherever over population of crop plants is existing, undertake thinning operation for better availability of soil moisture.

Tamil Nadu

Amount of rainfall received over Tamil Nadu is 218.5 mm (2 % deficit) during the period of 01 June to 28 August 2019. The extended range weather forecast for next two weeks (30 August - 05 September and 06 - 12 September) is below normal for week-1 and normal for week-2.

Under Prevailing weather conditions following advisories are issued

- Incidence of boll worm in cotton is expected. To control, spray Phosalone 35% EC@ 2.5 l/ ha or Quinalphos 25 EC@ 2.0 l/ha (or) Emamectin benzoate 5% SG @190-220 g/ha.
- Conditions are favorable for Yellow mosaic virus in pulses. To control, spray Dimethoate 30 EC @500 ml / ha or Thiamethoxam 75 WS @1 g/ lit.
- Shoot and fruit borer occurrence is noticed in Brinjal. To control, remove the affected fruits, terminal shoot showing boreholes and spray Neem Seed Kernel Extract 5 %.
- There is a chance of occurrence of red spider mite in bhendi. To control, spray Neem Seed Kernel Extract 5 %.

Maharashtra

Rainfall received over Madhya Maharashtra is 896.5 mm (55% excess), over Marathwada is 344.3 mm (29% deficit), Vidarbha is 736.6 mm (-3% excess) and Konkan region 3288.4 mm (34% excess) during 01 June to 28 August 2019. The extended range weather forecast for next two weeks (30 August - 05 September and 06 - 12 September)over Madhya Maharashtra is normal whereas Konkan and Vidarbha are above normal for both week-1 and week-2.

Madhya Maharashtra

- Weather is congenial for the occurrence of the leaf eating caterpillars in *kharif* sunflower, greengram, blackgram, pigeonpea etc., spray Chloropyriphos or Quinolphos @ 15-20 ml + 10 litre of water + 5 ml sticker.
- Prepare ridges and furrows or compartmental bunds of 6x6 meter size in the fallow land kept for *rabi* sowing. It will help to conserve more rain water during *kharif* and will help to increase yield of *rabi* jawar.

- For control of sucking pests in vegetable crops, spraying of 5 % Neem ark or Verticillum leccani (Phule bugicide) 1 kg + 1 l. milk in 200 lit of water or Imidyachloprid 17.8 SL 2 ml per 10 litre of water.

Vidarbha

- Present weather conditions are favorable for infestation of aphids and jassids. To control, spray Azadirachtin 1500 ppm @ 25 ml or Azadirachtin 0.03% (300 ppm) @ 50 ml or Imidacloprid 17.8% SL 2.5 ml or Profenofos 50% EC@ 20 ml per 10 litres water.
- For monitoring the incidence of stem fly in soybean, erect yellow sticky trap @ 4 per acre, and remove/destroy damaged plant parts.
- For surveillance and control of pink boll worm incidence, erect 4 to 5 pheromone traps/ha in cotton fields. Collect and destroy rosette flowers-buds before application of insecticides. Upon 5% infested flowers-buds, spray Quinalphos 25% AF @ 25 ML OR Chlorpyriphos 20% EC @ 25 ml per 10 litres of water.

Konkan

- Due to intermittent rainfall and cloudy weather condition, there is possibility of incidence of blue beetle on low land rice, hence observe crop regularly for infestation of pest. If incidence of blue beetle is noticed on rice crop, spray Quinalphos 25% EC @ 40 ml or Triazophos 40%EC@ 12.5 ml or Lambda Cyhalothrin 5%EC @ 5 ml per 10 litres of water.
- As there is a forecast of high humidity and increase in temperatures, there is possibility of incidence of bacterial leaf blight disease on rice. Symptoms of the disease are occurrence of water-soaked to yellowish strips on leaf blades and at leaf tips lead to drying of leaves from tip towards mid rib and appearance of bacterial ooze looking like a milky or opaque dew drop on lower side of leaves at early in the morning. If incidence is noticed, spray Streptocyclin 5 g + Copper oxychloride 25 g per 10 liters of water. The next two spray should be taken at an interval of 15 days.
- The forecast of increase in temperature which is congenial for vegetative flush in mango. Therefore, for protection of vegetative flush, spray Lambda cyhalothrin 5%EC@ 6ml or Quinalphos 25% EC @25 ml + Bavistin 20g per 10 litre of water.
- As there is a forecast of increase in humidity, there is possibility of incidence of downy mildew in cucurbitaceous vegetables. If incidence noticed, remove and destroy infected leaves and take a spray of Mancozeb or Zineb 2.5 gm /lit of water at an interval of 10 to 15 days.

Jharkhand

Jharkhand received 585.6 mm rainfall which is 27 % deficit during 01 June to 28 August 2019. The extended range weather forecast for next two weeks (30 August - 05 September and 06 - 12 September) is below normal for week-1 and normal for week-2.

- In fallow medium land, farmers with irrigation facility may proceed for maize cultivation with least

duration varieties like Birsa Maize -2 which matures in 70 - 80 days. Farmers may also select the variety Birsa Maize -1 which matures in 80 - 85 days.

- Due to attack of stem borer, the upper leaves and main stem of the plant starts drying. To control the stem borer spray insecticide Monocrotophos 36 E.C. @ 1-2 ml per litre of water and mix Tipol in the solution or prepare the solution in soap water. In case of heavy infestation, apply granular insecticide like Carbofuran 3 G @ 12 kg per acre) or Forate 10 G (@ 4 kg per acre). However, at the time of broadcasting of granular insecticide, stagnated water in the field is essential.

Jammu

Rainfall received during 01 June to 28 August 2019 over Jammu was 395.1 mm, which is 13% deficit. The extended range weather forecast for next two weeks (30 August - 05 September and 06 - 12 September) is below normal for week-1 and above normal for week-2.

- Due to presence of conducive weather, there may be attack of sheath blight in paddy. Under such conditions, spray Carbendazim @ 0.1%..
- The present weather conditions are favourable for attack of leaf blight in maize crop, under such situation spray mancozeb 75WP @ 0.25% or Zineb @0.02 %. If attack of stem borer is noticed, then apply the Carbofuran 3G @ 20kg/ha directly into the whorles.
- Weather is favorable for the attack of stem borer in maize. Under such conditions application of carbofuran/ cartap granules @ 5gm /whorl is recommended to control the pest.

Uttar Pradesh

Rainfall received during 01 June to 28 August 2019 over Western Uttar Pradesh was 412.9 mm (26% deficit) and for Eastern Uttarpradesh was 554.5mm (-12% deficit). The extended range weather forecast for next two weeks (30 August - 05 September and 06 - 12 September) is above normal for both week-1 and week-2.

Kanpur

- If Khaira disease is seen under late planted paddy, spray Zinc Sulphate@5.0 kg/ha with 2.0% Urea solution.
- Shallow hoeing is necessary to facilitate better root growth of pulses and oil seed crop.
- If shoot borer incidence is observed in sorghum, maize and pearl millet, apply Phorate 10% G @ 20 kg/ha or Quinolphos 25% EC @ 1.5litre/ha or Dimethoate 30% EC @ 1.0 l/ha in 500 litres of water.

Faizabad

- Under prevailing weather conditions, there is a possibility for attack of pyrilla in sugarcane. Hence farmers are advised follow suitable plant protection measures.

West Bengal

Rainfall received during 01 June to 28 August 2019 over West Bengal was 644.8 (27% deficit). The extended range weather forecast for next two weeks (30 August - 05 September and 06 - 12 September) is below normal for week-1 and normal for week-2.

- For early sown Aman rice, hot and humid weather favours gundhi bug infestation during flowering. If 5-6 bugs/m² are found, spray Carbaryl 50% or Chlorpyrifos 20% to control.
- Under high humidity and cloudy condition, combined attack of downy mildew and mosaic may be seen in bitter melon and bitter melon. To control, apply Ridomil gold MZ @ 2 g per litre.
- At the time of panicle initiation, farmers are advised to keep 5 to 7 cm water in the paddy fields.

Assam

Rainfall received during 01 June to 28 August 2019 over Assam and Meghalaya was 1224.0mm (14% deficit). The extended range weather forecast for next two weeks (30 August - 05 September and 06 - 12 September) is below normal for week-1 and week-2.

- During this monsoon period, farmers may observe small spindle shaped spots on foliage with greyish centre and yellowish halo running parallel to veins. To control this disease, Spray Carbendazim at first appearance followed by 4 sprays at 30 days interval.
- In order to control the infestation of citrus trunk borer, the holes made by the pest in the trunks should be spiked with wire to kill the grub followed by cleaning and plastering it with wet soil.

Punjab

Rainfall received during 01 June to 28 August 2019 over Punjab was 365.5 mm (4% excess). The extended range weather forecast for next two weeks (30 August - 05 September and 06 - 12 September) is below above normal for week-1 and week-2.

- Prevailing weather is favourable for the development and spread of fruit rot in chilli. To control, farmers are advised to 3-4 sprays of Folicur @ 250 ml of Indofil M-45 or Blitox 50 WP @ 750 gm/acre at 10 days interval.
- Prevailing weather is favourable for the development and spread of fruit rot in chilli. Farmers are advised to give 3-4 sprays of Folicur @ 250 ml or Indofil M-45 or Blitox 50 WP @ 750 g/acre at 10 days interval during clear weather conditions.

Bihar

Rainfall received during 01 June to 28 August 2019 over Bihar was 656.1 (16% deficit). The extended

range weather forecast for next two weeks (30 August - 05 September and 06 - 12 September) is below normal for week-1 and normal for week-2.

- Current weather and present phenological stages of the rice crop is conducive for infestation of stem borer. If infestation is observed, apply Carbofuran 3G@7kg per hectare or Cartap hydrochloride 4G(Caldan) @10kg/acre.
- Monitoring is advised for Yellow Vein Mosaic Virus (YMV) disease in okra. If infestation (diseased plant) seen in the crop field, spray Imidacloprid @ 0.3ml/litre of water

Rajasthan

Rainfall received during 01 June to 28 August 2019 over East Rajasthan was 706.5mm (44% excess). The extended range weather forecast for next two weeks (30 August - 05 September and 06 - 12 September) over east Rajasthan is above normal for week-1 and week-2.

- As there is humid weather conditions, there may be increase in population of insect pest of cotton. Farmers are advised to install pest specific pheromone traps in the fields for monitoring the insect. If sucking pest's population is above ETL, spraying of Imidacloprid 17.8 % SC @ 1.0 ml / 3 litre or Trizophos 40 EC @ 1.0 ml/litre of water is advised against all type of borers.

Himachal Pradesh

Rainfall received during 01 June to 28 August 2019 over Himachal Pradesh was 580.5 mm, which is 6% deficit. The extended range weather forecast for next two weeks (30 August - 05 September and 06 - 12 September) is normal for week-1 and above normal for week-2.

- The current weather is congenial for fruit blight and fruit rot disease in pomegranate, To control, spray Mancozeb 600g and Carbendazim 100 g @ 200 litre of water.
- To control the fruit rot in tomato remove the yellow leaves 15 to 20 cm near the ground and bury them into the soil and spray Mancozeb 250g or Redomil 250 g @ 100 litre of water at an interval of 8-10 days.

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